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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,496	01/21/2004	Tomoyuki Ohzeki	FS-F03224-01	1131
37398	7590	08/16/2006	EXAMINER	
TAIYO CORPORATION 401 HOLLAND LANE #407 ALEXANDRIA, VA 22314			CHEA, THORL	
			ART UNIT	PAPER NUMBER
			1752	

DATE MAILED: 08/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/760,496

Applicant(s)

OHZEKI ET AL.

Examiner

Thori Chea

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on July 5, 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-24 and 26-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-24 and 26-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This first office action is responsive to the communication July 5, 2006. Claims 1, 4-24, 26-32 are pending in this instant application; claim 2-3, 25 has been canceled.
2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 5, 2006 has been entered.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 4-9, 22-24, 26, and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination Okada et al (US Patent No 6,210,983), Oya et al (US 2002/0,048,732), Oya et al (US 2003/0,235,791) and Oyamada et al (US 2003/0,087,204).
Okada et al discloses a photothermographic material containing silver halide, a non-photosensitive organic silver salt, a reducing agent and a compounds having an X as an adsorption promoting silver halide and D is an electron donative group of atoms and L₁ is a covalent or a linking group. See formula (1) in column 3; the exemplified compound in columns 11-22, compounds 1-60. The compound contains X group within the scope of A and

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the W group within the scope of (W) claimed in the present claimed invention. D group is an electron donative group of formula (D-1), (D-2) and (D-3) in column 5, lines 10-25. The exemplified compound in column 13-14, compounds 7, 8 contains the group -NH(C=O)NHOH which is the hydroxyureas group claimed in claimed invention. Okada et al disclose the use of silver halide including silver iodide and silver halide having silver iodide content from 0.1 to 40 mole % in column 36, lines 3-17; bisphenols reducing agents in column 39, lines 21-32; and binder in column 41, lines 13-30.

Okada et al fail to disclose the development accelerator of formula (1) to (3) in claims 1, 15, but development accelerator as claimed have been known in Oya et al (US 2002/0,048,732), Oya et al (US 2003/0,235,791) and Oyamada et al (US 2003/0,087,204). See '732 in the abstract formula (1) and formula (3) on page 2; '204 on page 3, formula (1) to (3) and '791 page 2, formula (1), (2), (6), (7). It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use the development accelerator known in Oya et al (US 2002/0,048,732), Oya et al (US 2003/0,235,791) and Oyamada et al (US 2003/0,087,204) in the material of Okada et al to increase the speed of development thereof, and thereby provide a material as claimed.

5. Claims 10-14, 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okada et al (US Patent No. 6,210,983) in combination with Tsuzuki et al (US Patent No. 5,677,121) and EP 1096310A2 (EP'310).

Okada et al discloses a photothermographic material containing silver halide, a non-photosensitive organic silver salt, a reducing agent and a compounds having an X as an adsorption promoting silver halide and D is an electron donative group of atoms and L_1 is a

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covalent or a linking group. See formula (1) in column 3; the exemplified compound in columns 11-22, compounds 1-60. The compound contains X group within the scope of A and the W group within the scope of (W) claimed in the present claimed invention. D group is an electron donative group of formula (D-1), (D-2) and (D-3) in column 5, lines 10-25. The exemplified compound in column 13-14, compounds 7, 8 contains the group -NH(C=O)NHOH which is the hydroxyureas group claimed in claimed invention. Okada et al disclose the use of silver halide including silver iodide and silver halide having silver iodide content from 0.1 to 40 mole % in column 36, lines 3-17; bisphenols reducing agents in column 39, lines 21-32; binder including copoly(styrene-butadiene) in column 41, lines 36-50; and silver salt of an aliphatic carboxylic acid including silver behenate in column 37, lines 35-40. Tsuzuki discloses the use of silver salt of an organic acid wherein the acid behenic is from 35 to less than 90 mol % to provide a photothermographic material with excellent storability, excellent graininess and high definite image (abstract, and column 1, lines 5-8. EP'310 on pages 38-39 discloses the binder for a photothermographic material including styrene-butadiene having glass transition temperature of less than 40 °C. It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use a known binder taught in EP'310 and the silver salt of an organic acid taught in Tsuzuki in the material taught in Okada et al with an expectation of achieving a material excellent storability, excellent graininess and high definite image.

6. Claims 15-21, 28, 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Okada et al (US Patent No. 6,210,983) and Fukui et al (US 2002/0102502A1).

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Okada et al discloses a photothermographic material containing silver halide, a non-photosensitive organic silver salt, a reducing agent and compound having an X as an adsorption promoting silver halide and D is an electron donative group of atoms and L₁ is a covalent or a linking group. See formula (1) in column 3; the exemplified compound in columns 11-22, compounds 1-60. The compound contains X group within the scope of A and the W group within the scope of (W) claimed in the present claimed invention. D group is an electron donative group of formula (D-1), (D-2) and (D-3) in column 5, lines 10-25. The exemplified compound in column 13-14, compounds 7, 8 contains the group -NH(C=O)NHOH which is the hydroxyureas group claimed in claimed invention. Okada et al disclose the use of silver halide including silver iodide and silver halide having silver iodide content from 0.1 to 40 mole % in column 36, lines 3-17; bisphenols reducing agents in column 39, lines 21-32; and binder in column 41, lines 13-30. Okada et al may not disclose the polyhalogenate compound of formula (H) in claim 15, but this compound have been conventionally used as antifoggant for photothermographic material and taught in Fukui et al on page 18, [0188]. It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use the antifoggant known in Fukui et al in the material of Okada et al to improve the fogging property thereof, and thereby provide a material as claimed.

7. Cited of interest: Ikienoue et al (US Patent No. 4,170,480) in column 14, lines 14-30 and column 15, lines 37-55 disclose suitable reducing agent such as N-hydroxyureas and 1-phenyl-3-pyrazolidones as reducing agent for suitable silver salt of an organic acid.

Response to Arguments

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8. Applicant's arguments filed July 5, 2006 have been fully considered but they are not persuasive of the ground of rejection set forth above. The compound of formula (I) presented in the claimed invention containing hydroxyureas is exemplified by Okada et al, in column 13, compound of formulae (7), (8), 9. Therefore, the compound has been known in Okada et al. Moreover, the reducing group such as 1-phenyl-3-pyrazolidones has been known as equivalent to N-hydroxyureas such as disclosed in the reference which is cited of interest, Ikenoue et al.

The applicants appears to argue that the compound of formula X-L₁-D in Okada ensure sufficient super sensitization effect in the red to infrared region, especially in the practically advantageous infrared region in the range of 750 nm to 1400 nm; whereas, the compound presented in the claimed invention improves raw stock stability and image stability such as print-out resistance. These affects of the compound of the present invention would not have been obvious in view of Okada et al.

The argument is not persuasive since the type of the material presented in the claims encompasses the type of the material taught in Okada et al. The claiming of the exposure of the material to the laser beam in claims 8-9 is related to the process of using the material which fails to limit the scope of the claimed invention. Claims 31-32 is related to the photothermographic material which is spectrally sensitized by spectral sensitizer having maximum wavelength from 300 nm to 500 nm. However, this limitation would have been found prima facie obvious to the worker of ordinary skill in the art at the time the invention was made. Okada et al in column 28, lines 6-19 discloses "it is advantageous to select a sensitizing dye having appropriate spectral sensitivity to the spectral properties of the particular light source of various laser imagers, scanners, image setters and printing plate-forming camera". Okada et al appears to prefer the

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spectral sensitizing dye having sensitivity in the red or infrared region, but this is not necessarily meant that the material taught in Okada et al is limited to the material having sensitivity in the red or infrared region. The worker of ordinary skill in the art would have selected the spectral sensitizing having sensitivity corresponding to light source wavelength including the uv light or visible light.

The improvement of the print-out presented in the argument is not persuasive since this improvement is related to the use of silver halide containing high silver iodide content and the silver salt of an organic acid containing high silver behenate of the bisphenol reducing agent. This results would have been expected by the worker of ordinary skill in the art since silver iodide is less sensitive to light, and the processed photothermographic material would not affect by irradiation, and thereby the print-out would be improved. Moreover, the argument with respect to the improvement of print-out is not persuasive since the use of silver halide having high iodide content is not presented in the independent claims.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thorl Chea whose telephone number is (571) 272-1328. The examiner can normally be reached on 9 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (571)272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tch *th*
2006-07-31

Thori Chea

Thori Chea
Primary Examiner
Art Unit 1752